REMARKS/ARGUMENTS

Reconsideration of the present application is respectfully requested.

Of previously pending claims 1-14, 8-12, 14-21, 24-30, 32-40, 42-49, 52-58 and 60-68, all were rejected.

Specifically, claims 1, 8-12, 14, 17, 21, 24-27, 29, 43, 45, 49, 52-55, 57-58, 60-64 and 66-68 were rejected under 35 U.S.C. §103(a) as being obvious over the previously cited Sugaya '289 patent in view of U.S. Patent No. 6,433,903 which issued August 13, 2002 to R.A. Barry *et al.* Remaining claims 2-4, 16, 18-20, 28, 30-40, 42-44, 46-48, 56, 65 and 66 were rejected under 35 U.S.C. §103(a) as being obvious over the combination of the previously cited Sugaya '289, Barry '903 and Tanaka '712 patents.

Applicants respectfully disagree and address their arguments with respect to independent claims 1, 15, 33 and 43, which call for at least one sub-band of WDM optical signals and reference signals at the boundaries of the sub-band. For example, claim 1 explicitly recites, "...receiving over an optical fiber at least one sub-band of WDM signals and first and second reference signals, the first reference signal at a first boundary of the sub-band and the second reference signal at a second boundary of the sub-band...".

In rejecting these claims (except claim 33 for which the Tanaka patent is added in combination), the Examiner cites the Sugaya patent as teaching the applicants' claimed invention, except that "Sugaya differs from claims 1, 16, 43 of the present invention in that he does not specific [sic] disclose the first reference signals at a first boundary of its sub-band and the second reference signal at a second boundary of its sub-band. Barry discloses a WDM system having low end and high end optical management channel (same as reference signals) located at the boundary of the sub-band (see figure 4, col. 3, lines 26-52). At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Barry in the system of Sugaya. One of ordinary skill in the art would have been motivated to do this in order to provide substantial band-width for use by a user's

network management system, without significantly degrading the performance of the data channels and for managing equipment in multiple management domain (col. 3, lines 42-55)."

With due respect to the Examiner, the Barry patent does not discloses "a WDM system having low end and high end optical management channel (same as reference signals) located at the boundary of the sub-band...(underlining added)." Rather, a WDM system having a low end or high end optical management channel is disclosed. For example, in summarizing their invention, Barry *et al.* state, "In a preferred embodiment, the management optical signal resides at an edge of the pass band of the optical amplifiers (underlining added)." Col. 3, lines 31-32. Fig. 4, the portion of the Barry patent cited by the Examiner, actually teaches that this management optical signal might be located at one edge of a passband or at the other, but not at both edges. "Fig. 4 illustrates a preferred OMC implementation. A wavelength is chosen for the OMC that is at the edge of the pass band of the EDFAs 16, in a region beyond that specified for use by the DWDM system. The pass band is defined, for example, by the wavelengths at which the amplifier gain drops by 1 dB from its mid-band value. For instance, consider a C-band system, in which the EDFAs 16 might be specified for use between 1530 nm and 1560 nm as shown. The wavelength for the OMC could be as the low end of the pass band, such as at 1529.5 nm, or at the high end, such as at 1561 nm. The EDFAs 16 do not provide as much gain in these edge regions as in the center of the pass band, and thus these marginal wavelengths are not useful for carrying data channels (underling added)." Col. 6, lines 27-40.

Furthermore, the Examiner concludes that "[o]ne of ordinary skill in the art would have been motivated to do this (incorporate the teachings of Barry into the system of Sugaya) in order to provide substantial band-width for use by a user's network management system, without significantly degrading the performance of the data channels and for managing equipment in multiple management domain (col. 3, lines 42-55) (parenthesis added)." The applicants assert that this is a tortured conclusion of the teachings of the Barry and Sugaya patents.

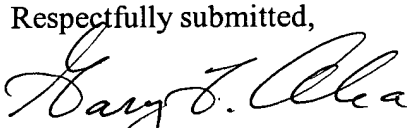
First, the cited language is from the Barry patent which found that "[a]n in-fiber, in-band OMC can provide substantial band-width for use by a user's network management system, without significantly degrading the performance of the data channels...and to achieve additional benefits, such as managing equipment in multiple management domain." Col. 3, lines 42-52.

That is, a single optical management channel provides the substantial bandwidth for network management. Secondly, the Sugaya patent in its numerous variations and embodiments teaches the transmission of "a supervisory optical signal without largely degrading the transmission quality of a main signal." Col. 4, lines 41-43. Sugaya *et al.* are parsimonious in their use of optical supervisory channels. The Examiner's conclusory statement implies that the more optical supervisory channels the better. From the applicants' reading of the patent, no more than two OSCs are used in the Sugaya systems and none with OSCs at both edges of a signal band. Hence why Sugaya *et al.* should adopt the teachings of the Barry patent remains unexplained.

In summary, the applicants assert that the Barry patent does not teach the simultaneous use of optical supervisory or management channels at both edges of a sub-band and that the combination of the Sugaya and Barry patents as urged by the Examiner is forced and without foundation.

Therefore, in view of the remarks above, the applicants respectfully request that the rejections be withdrawn, that claims 1-4, 8-12, 14-21, 24-30, 32-40, 42-49, 52-58 and 60-68 be allowed, and the case be passed to issue. If a telephone conference would in any way expedite the prosecution of the application, the Examiner is requested to telephone the undersigned at (408) 446-7687.

Respectfully submitted,



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